

## Patent Abstracts of Japan

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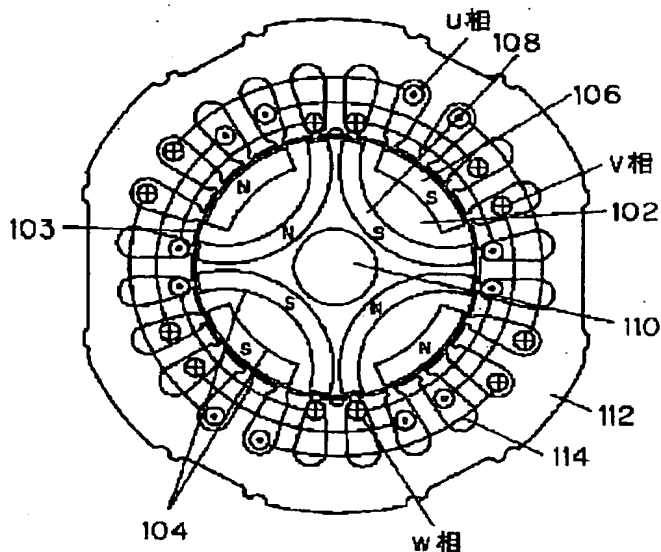
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TITLE : MAGNET EMBEDDING TYPE MOTOR



**ABSTRACT :** PROBLEM TO BE SOLVED: To provide a high efficiency motor having improved orthogonality between magnetic flux and current by forming one-pole magnet arranged at the inside of rotor with an arcuated first magnet and a second magnet of different shape and separated from the first magnet.

**SOLUTION:** A magnet inserting hole 104 is provided on a rotor iron core 102 and a first magnet 106 and a second magnet 108 are inserted thereto. Here, the first magnet 106 is arranged near the surface of the rotor cylinder 103. The magnetic flux permeability of the magnet is rather smaller than that of the rotor. The first magnet 106 or the rotor is formed in the normal or inverse arc. A stator 112 is provided in these rotors and to the entire circumference of the rotor. A 3-phase coil is wound to a slot 114 of the stator 112. Thereby, the generation of magnetic flux caused by the current can be reduced, the orthogonality between total magnetic flux and total current can be improved and a torque for the unit current is increased to realize a small sized motor assuring high efficiency and high output.

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